



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,333	12/11/2001	Kenji Aoki	0671.66008	1506
24978	7590	09/03/2004	EXAMINER	
GREER, BURNS & CRAIN 300 S WACKER DR 25TH FLOOR CHICAGO, IL 60606			MILLER, BRIAN E	
			ART UNIT	PAPER NUMBER
			2652	

DATE MAILED: 09/03/2004

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/014,333	AOKI, KENJI
Examiner	Art Unit	
Brian E. Miller	2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 07 June 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,3-12,14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,5,11,12,14 and 15 is/are rejected.
- 7) Claim(s) 3-4, 6-10 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

- . Claims 1, 3-12, 14-15 are now pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5, 11-12, 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lakshmikumaran et al (US. 6,282,055). Lakshmikumaran et al discloses a head for writing/reading to/from a magnetic tape, as shown at least in FIGs. 1-3, including: (as per claims 1 & 12) a first elongated chip assembly 12 fixedly adhered to a second elongated chip assembly 16 (via chip assembly 14); a tape running surface 34 formed in a longitudinal direction of the first and second chip assemblies; a read/write gap line 18 for supporting a read/write element extending longitudinally along the tape running surface on each of the first and second chip assemblies; at least one groove 20 formed on each side of the read/write gap line on each of the first and second chip assemblies and extending substantially parallel to the read/write gap line (see FIG. 3); wherein each of the grooves have a depth greater than its width (see col. 3, lines 20-23); (as per claim 5) wherein each of the first 14 (note change) and second chip assemblies (12-note change or 16) includes a first block having a substantially planar first surface and a second block having first and second surfaces, the first surface of the first block being attached to the first surface of the second block, the second surface of the second block of the first chip assembly is adhered to the second surface of the second block of

the second chip assembly (the actual surfaces of the respective blocks are unnumbered, however, it is apparent from FIG. 2); (as per claim 14) the tape running surface of the chip assembly curves in a direction transverse to the longitudinal direction (see col. 2, lines 45-47); (as per claims 11 & 15) at least one groove 20 formed on a first side of each read/write gap line and two grooves 20, 38 formed on a second side of each read/write gap line.

With respect to the limitation, i.e., “each of the grooves has a width which is greater than or equal to a width of an entire wall separating said grooves on both sides of each read/write gap line”, while Lakshmikumaran et al recites “preferable” dimensions (see col. 3, lines 20-25), it would have been considered within the knowledge of a skilled artisan to have modified these dimensions appropriately; see col. 4, lines 34-36 which recites that “While the locations and dimensions of transverse slots 20 and 38 and slotted regions 22 detailed above are preferable, other locations and dimensions may also be used.” From these suggestions and teachings, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the widths of the grooves to have been greater than or equal to the width of the wall portion, as set forth, supra. The motivation would have been: lacking any unobvious or unexpected results, forming the groove dimension width to be equal to or greater than the wall, would have resulted through the course of routine engineering optimization and experimentation. Moreover, absent a showing of criticality, the relationships set forth in the claims are considered to be within the level of ordinary skill in the art.

Art Unit: 2652

• Additionally, the law is replete with cases in which the mere difference between the claimed invention and the prior art is some range, variable or other dimensional limitation within the claims, patentability cannot be found.

It furthermore has been held in such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range(s); see *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Moreover, the instant disclosure does not set forth evidence ascribing unexpected results due to the claimed dimensions; see *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338 (Fed. Cir. 1984), which held that the dimensional limitations failed to point out a feature which performed and operated any differently from the prior art.

Allowable Subject Matter

3. Claims 3-4, 6-10 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

4. Applicant's arguments filed 6/7/04 have been fully considered but they are not persuasive.

A...Applicant's main assertion is that "the Lakshmikumaran et al. reference fails to disclose (or suggest) a head 'wherein each of said grooves has a width which is greater than or equal to a width of an entire wall separating said grooves on both sides of each

Art Unit: 2652

said read/write gap line, at a depth which is greater than or equal to said width of said grooves.”

In response, while Lakshmikumaran does not show such a relationship under 35 U.S.C. § 102, certainly Lakshmikumaran encompasses this dimensional limitation at least by obviousness, as discussed above. It is maintained that adjusting the dimensions of the grooves of Lakshmikumaran to optimize tape contact and speed would have been readily realized by a skilled artisan. The results cited by applicant (FIG. 3) are not considered to encompass unobvious or unexpected results, especially when comparative testing with the head of Lakshmikumaran has not been established.

It is noted that while the Examiner considers it to have been obvious to modify the dimensions of the grooves of Lakshmikumaran, as discussed, supra, limitations such as providing an “offset”, as set forth in claim 3, have been indicated as allowable over the prior art of record.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

Art Unit: 2652

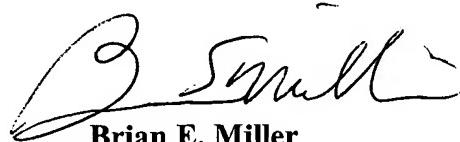
advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian E. Miller whose telephone number is (703) 308-2850. The examiner can normally be reached on M-TH 7:15am-4:45pm (and every other friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brian E. Miller
Primary Examiner
Art Unit 2652

Bem
8/02/04